Richard Kha

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in Richard Kha | ○ kRichard32

Toronto, Ontario, Canada

EDUCATION

- **University of Toronto** *September 2021 - August 2025*
  B.Sc. in Computer Science (Honours), focus in Artificial Intelligence Toronto, Canada
  ◦ GPA: 3.95 / 4.00
  ◦ Relevant coursework: Data Structures & Analysis, Algorithm design & Analysis, Operating Systems, Introduction to Machine Learning, Neural Networks & Deep Learning

SKILLS

- **Programming Languages:** Java, Python, C/C++, JavaScript, React.js
- **Database Systems:** PostgreSQL
- **Data Science & Machine Learning:** Pytorch, Scikit-learn, Numpy
- **Cloud Technologies:** Google Cloud Platform, Docker
- **Version Control:** Git, GitHub
- **Other:** Linux, Data Structures & Algorithms

WORK EXPERIENCE

- **Optimizing remote JIT compilation for the JVM** *May 2024 - August 2024*
  Undergraduate researcher (University of Toronto & IBM CAS)
  ◦ Developed benchmarking tools (Using Python, Java, Docker) to measure the speed of the JITServer
  ◦ Developed a scheduling algorithm in C++ which reduces client runtime by up to 9% in high load scenarios
  ◦ Co-wrote the **paper** on our findings and performed an oral presentation at HotInfra '24

- **Automating Data Analysis for Enhancing ASD Therapy Sessions** *September 2024 - December 2024*
  Undergraduate researcher (University of Toronto)
  ◦ Implemented a diarization model (Deep neural network) from a recent paper and conducted tests to determine effectiveness of model
  ◦ Developed an improved version of the diarization model with increased accuracy in the child-adult speech scenario and implemented an algorithm to improve transcriptions accuracy
  ◦ Wrote a brief **report** on our findings

SELECTED PROJECTS

- **Koko: [A social app for seniors]** *July 2025 - Present*
  Tools: [Java spring boot, React.js, Firebase, PostgreSQL, WebRTC, Google Oauth] [https://kokosocial.ca/]
  ◦ Developed an android app to support social communication within older adult communities with a strong focus on accessibility
  ◦ Full stack development; implemented both the front end mobile app and the java resource server for the app
  ◦ Created messaging, video calling services, user creation services, and matchmaking services
  ◦ Implemented a voice navigation feature for ease of use within the app

- **Neural Network Pokemon Image Classifier** *May 2025 - June 2025*
  Tools: [PyTorch, Triton Inference Server, ONNX, Python, React] [○]
  ◦ Implemented a convolutional neural network and trained it on a set of Pokemon images for classification
  ◦ Created a React GUI which connected to a python backend through REST endpoints

HONORS AND AWARDS

- **Undergraduate Student Research Award (USRA)** *May 2024 - September 2024*
  Natural Sciences and Engineering Research Council of Canada (NSERC) [⊕]
  ◦ Award to support summer research done in 2024

PUBLICATIONS

[1] R. Kha, N. Sreekumar, A. Khrabrov, E. de Lara, A. Brown, M. Gabel, M. Pirvu. (2024). **Towards Optimal Remote JIT Compilation Scheduling for the JVM**. 2nd Workshop on Hot Topics in System Infrastructure (HotInfra 2024) held in conjunction with SOSP 2024. November 2024.

VOLUNTEER EXPERIENCE

- **Coding/Math Tutor** *August 2021 - Present*
  YDC - Youth Dream Canada [⊕]
  ◦ Mentored students in a 1 on 1 setting in computer science and math